Nutrition News

PUBLISHED BY NATIONAL DAIRY COUNCIL · CHICAGO

CONTENTS

Article — *Page 1*
Analyzes the problem of good nutrition

Story — *Page 2*
Dramatizes the relation of diet to physical fitness

Digests — *Page 2*
Review new nutrition studies at a glance

Project — *Page 3*
Describes a remarkable nutrition study of college women

Plan — *Page 3*
Tells a simple way to improve food habits of high school students

News — *Page 3*
Brings you word of the nutrition world

Books — *Page 4*
Remind you of what you'll want to read

AN INVESTMENT IN PROTECTIVE FOODS IS AN INVESTMENT IN GOOD NUTRITION

By E. V. McCOLLUM, Ph.D., Sc.D.
Johns Hopkins University

The fundamental researches of the past forty years have placed nutrition in a prominent position as an agency affecting health. Investigations into the nutritional status of various population groups is now in progress in many countries, as the result of recognition that infant mortality, impairment of health of mothers, physical development of workers and excessive loss of time from industrial work, are profoundly influenced by the character of the food supply.

That the dietaries of large numbers of people in Europe and the Americas are inferior in quality is now widely appreciated, not only by nutrition workers, and physicians, but by administrators as well, and governments are becoming increasingly active to find remedies for their nutritional problems.

In general, throughout the Western World, the problem is one of stimulating the consumption of those articles of diet which I distinguished more than twenty years ago as The Protective Foods. The most important of these are dairy products. Eggs, and green and yellow vegetables, and to a lesser extent meats, are also protective foods. They are so called because they provide in abundance certain essential nutrients which are supplied in too small quantities by cereal grains, peas, beans, sugar, vegetable fats, etc., foods which are everywhere prominent constituents in the human dietary.

In proportion to the extent to which highly refined cereal foods and sugar find a place in the diet, the greater is the need for the other articles in the daily menus to be derived from the protective foods, in order that the diet may be made nutritionally adequate. We know what happens when the protein of

Doctor McCollum

the diet is deficient or of poor quality; the effects of deficiency of such mineral elements as calcium, phosphorus, iron, iodine and others; the kinds of impairment of health which result from vitamin deficiencies. There is no longer any guesswork about the assessment of the quality of a dietary.

Nothing in life can pay better dividends than physical and mental health. The role of the many diseases which impair human health is easily visible to every observing person. The effects of malnutrition are more insidious, but no less serious than diseases caused by bacteria. Their prevention is much simpler than are the problems of the medical profession in the field of preventive medicine.

The production of adequate supplies of milk, butter, cheese, ice cream and other dairy products is sound agriculturally, economically, and physiologically, and the main

(Continued on Page Four)

OCTOBER, 1937 • • VOLUME 1. • • NUMBER 1.

Nutrition News

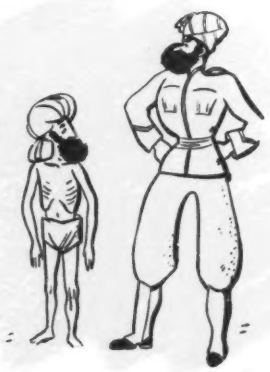
Food MAKES THE DIFFERENCE

A TRUE STORY

Reliable observations on the dietary habits and nutritional status of isolated tribes furnish clear-cut evidence of the relation of adequate diet to good nutrition, and of inadequate diet to poor nutrition.

In far-off India there live two tribes of people who are just as different physically as any people of the same race and country could possibly be. The Sikhs, who live in northern India, are among the finest specimens of mankind; tall, strong and stalwart, they are known for their manliness and courage. In southern India are the Madrassi—small, poorly developed, sickly, and without energy.

What is the cause of the great difference between these people? Major General McCarrison, representing Great Britain in the Indian Medical Service for many years, believed it was diet and set about to see if he was right. He found that the hardy people



The Sikhs—strong and stalwart; the Madrassi—small and stunted.

of the north are users of animal proteins and animal fats and particularly that they consume large quantities of milk and other dairy products, while the weakly people of the south use milk and meat sparingly or not at all. Furthermore while all through India the people eat cereal grains, going from north to south there is a gradual decline in the nutritive value of the grains eaten.

The typical diet of the stalwart Sikhs is made up of milk, and the products of milk—butter, curds, and buttermilk—, freshly ground whole wheat made into cakes of unleavened bread, legumes, fresh carrots and cabbage, tomatoes, root vegetables, and fresh meat once a week. In contrast, the diet of the poorly developed Madrassi consists of washed polished rice, legumes, fresh vegetables, condiments, vegetable oil, coffee with sugar, little milk, cocoanut, and betel-nut.

An Interesting Experiment

To find out conclusively if these two diets were the cause of the great contrast in the strong Sikhs and the weakly Madrassi, Colonel McCarrison performed an interesting experiment. He took two large groups of young white rats in his laboratory. To one group he fed the diet of the Sikhs, to the other the diet of the Madrassi. Rats need the same kinds of food that we do, but their life span is shorter so they are affected more quickly by changes in diet than we are.

The white rats were all healthy before the experiment began, but at the conclusion of the experiment, a period corresponding to twelve years of human life, the animals showed exactly the same contrast in size and vigor as the Sikhs and Madrassi. The average weight of the white rats fed on the Sikh diet was 235 grams as compared with an average weight of only 155 grams for the animals on the Madrassi diet. Furthermore, the well-fed rats were sleek in appearance, contented in disposition and free from disease. In contrast, those fed the Madrassi diet had rough coats, were quarrelsome and suffered from many diseases.

Colonel McCarrison's experiment proves what Dr. McCollum has ably pointed out, that a good diet containing milk and other protective foods is not only of primary importance in building strong bodies, but also in resisting disease.

glances AT NUTRITION RESEARCH

Research is the basis of all sound educational endeavor. In the many phases of nutrition education, therefore, we look to research as the guiding and stimulating force.

CONSUMER SURVEY

Data from the largest food consumption survey ever undertaken is now being analyzed by the Bureau of Home Economics in Washington. This study of food habits of 20,000 families in different parts of the United States shows that family meals most often lack calcium and vitamins A, B, and G, signifying a need for more milk, butter, eggs, whole grain cereals and leafy green vegetables.

PASTEURIZED MILK

New contributions have just been made to a much debated question—that of the effect of pasteurization on the calcium and phosphorus of milk. Two studies, one from England, the other from Scotland, agree that pasteurization of the milk does not lessen the amount of calcium and phosphorus retained by the body. These conclusions were reached as a result of balance experiments on young white rats.

VITAMIN B COMPLEX

Vitamin B has attracted much attention of late because of its multiple nature. Its various divisions have recently been designated as follows: B_1 the antineuritic vitamin; lactoflavin, called vitamin B_2 or G; the antipellagric or filtrate factor; vitamin H or B_6, the rat antidermatitis factor; B_1, the antiparalytic factor; and factor W, with functions not entirely clear.

FOOD FLAVORS

Flavor as the "voice of food" has gained in importance rapidly. Consumer preferences for foods and the perfection of methods for determining such preferences, accurately, has become a science. The magazine **Food Research** has devoted its entire last issue (Volume 2, Number 3, 1937) to a **Flavors in Food Symposium Number.** A series of papers outline important problems in field and present specific reports of progress in developing and preserving fine flavors in such foods as milk, butter and meat.

A SCIENTIFIC STUDY

By Dr. P. Mabel Nelson
Iowa State College,
Chairman New Project

A new and unusual development in nutrition research is a cooperative regional project participated in by the nutrition departments of several land grant colleges of the middle west. The subject of this joint research is the physiological and nutritional needs of college girls—a subject badly needing investigation but one heretofore practically untouched.

The primary purpose of this cooperative research is to engage in systematic, coordinated investigations which, when completed, will provide significant data from which useful and valuable conclusions can be drawn. The work is organized under a "master project" which outlines the aims, procedure and methods involved. The plan calls for a five-year study to be directed by a permanent chairman and advisory committee selected from the participating group.

The subject chosen for joint research—the nutrition of college women—is a particularly pertinent and vital one. Present scanty records on the physiological status of college women suggest the prevalence of relatively widespread, low-grade, chronic undernutrition among them. Similarly dietary studies among college groups indicate failure to fully meet present dietary standards. The situation therefore warrants a comprehensive study of girls of this age in order to obtain data on which to establish: (1) satisfactory standards or norms of physical well-being; (2) dietary standards, adequate to meet these norms.

If the new cooperative studies show college women at present to be physically fit, obviously dietary standards must be modified in accordance with present food habits. If, on the other hand, as may be expected, college women, in general, are shown to be below par physically, the problem will be one of improving food habits to meet dietary standards as high, or higher, than those which now exist.

Six colleges and universities of the North Central region are participating in this unusual cooperative undertaking for the year 1937-38. Each has chosen portions of the master project which it is best equipped to handle in its own institution. All are contributing experiences and data which, when finally fitted together in a completed whole, will be a significant contribution to the field of nutrition research.

TIMELY *Topics*

Nothing augurs so strongly for better health of the human race as the recent world-wide nutrition movement initiated by the League of Nations. Our official representatives on the Committee of Technical Experts in Nutrition of the Health Section of the League will sail soon to attend the third annual meeting of the committee held this year in Geneva, Switzerland, November 15-21. The committee members from this country are three of our leading scientists: Mrs. Mary S. Rose of Columbia University, Dr. W. H. Sebrell of the National Institute of Hygiene, Washington, and Professor E. V. McCollum of the Johns Hopkins University.

One of the first duties of the Nutrition Committee was to define the physiological bases for adequate nutrition under different conditions of life and to stress the special needs of pregnancy, lactation and growth. In its general recommendations it points out that "milk should form a conspicuous element of the diet at all ages" and that whole-grain cereals, vegetables, and fruits add important protective qualities to the diet. Special reports of the Nutrition Committee are available in pamphlet form through the Columbia University Press, 2960 Broadway, New York.

Everyone interested in nutrition and health education will be glad to know that a new child health organization was formed in Detroit in June 1937 at the summer meeting of the National Education Association. The new organization represents the union of two previously existing groups, i.e., The American Physical Education Association and the Health and Physical Education section of the N.E.A. There are three divisions of the new organization, one each on health education, on physical education and on recreation. Dr. Edna Bailey of the University of California is Chairman of the Health Education Division.

A PRACTICAL PLAN

By Mrs. Marion La Metre
New Trier High School,
Winnetka, Ill.

One way to teach good food habits to freshman high school girls is to let them study the eating habits of their fellow students. By so doing the personal element is removed from the problem and they can approach it and analyze it in a perfectly unbiased manner.

A three weeks project built on this plan in our school seeks specifically to improve lunch choices in the school cafeteria. It is conducted in conjunction with regular class work in freshman foods. The procedure is as follows:

First week—Each pupil in the class records the lunches chosen for one week by two other high school girls with whom she customarily lunches. She records these meals carefully, with their cost, and turns them in daily at the regular class period.

In addition, each pupil makes another type of observation such as: the proportion of trays in the lunchroom which include milk, or the number that have more than one dessert. Or, she may observe three lunches chosen by a certain student, for example, one who is over or underweight, or an honor student.

Second week—Class discussion is devoted to the problems presented by the records gathered. For example, what can be done about the student who doesn't drink milk? What can be eaten in place of whole grain bread? Is there a relation between weight and food habits? Do students with good grades actually make better lunch choices?

An important aspect of this discussion is the fact that the students whose lunches have been observed remain anonymous, usually being designated merely by numbers or letters. This practice stimulates free and honest criticism of food habits and even encourages pupils to interject their own food and health problems without the embarrassment of personal reference.

Finally, each pupil sums up the faulty food habits of her friends as she sees them revealed in their lunch choices. As an aid in so doing the class works out an adequate daily diet, including recommended amounts of dairy products, vegetables, fruits, etc. Next they try substituting the lunches chosen by their friends. It is soon apparent to the class that unless lunches

(Continued on Page Four)

DID YOU KNOW ?

—that the Tower of Butter, built in the 12th century, still stands today in Rouen, France? This beautiful stone structure was erected with money contributed to the priests by the peasants who so prized butter as a food that they paid for the privilege of eating it during Lent.

—that long ago the old Orange County (New York) Bank printed its bank notes in golden yellow to signify that butter was the source of the wealth and prosperity of the county?

—that the first advertisement for ice cream appeared in the New York **Gazette**, May 19, 1777? Philip Lenzi, a confectioner from London, told his patrons in the columns of the **Gazette** that ice cream might be had at his confectionery shop "most every day."

—that there are eighteen distinct kinds of cheese available today and four hundred different varieties?

—that last year a total of 350 research projects were under way in the home economics departments of land grant institutions? Of this number 145 were on foods and 100 on some phase of nutrition.

—that the life of a milk bottle is now 30 to 35 trips, in contrast to 22 trips some years ago?

—that a golfer playing 18 holes on a warm day gives off enough heat to raise the temperature of a ton of water one degree, and loses enough water through perspiration to fill two water glasses?

THINGS YOU'LL LIKE TO READ

FOOD, NUTRITION AND HEALTH (4th ed. rev.)—E. V. McCollum and J. Ernestine Becker—published by authors, Baltimore, Md., 154 pp., $1.50. 1936.

This book tells in simple, readable style the story of the newer knowledge of nutrition. Not only does it take up one by one the essential factors in good nutrition but considers from a practical angle such topics as reducing and building-up diets. In addition it gives sample menus and vitamin tables which make it a doubly useful book for teachers and homemakers.

VITAMIN CONTENT OF FOODS—by Daniel, E. P. and Munsell, H. E. Miscellaneous Publication No. 275, U. S. Dept. of Agriculture, Washington, D. C. June 1937. (Government Printing Office, $.15)

The last word on vitamins; contains unit values in tabular form for vitamins A, B, C, D and G.

IT'S ICE CREAM—by E.M. Geraghty, Hygeia Magazine, August 1937.

"No matter how many desserts are thought up, ice cream still stays at the top of the season's best sellers among desserts." This article discusses the food value of ice cream, its use in the menu, and gives recipes for many sauces to serve with it.

LIST OF EDUCATIONAL MATERIAL. Practical Home Economics, September 1937.

Just the right illustrative material often "makes" a lesson or project. Practical Home Economics aids you in the selection of this year's illustrative material by devoting twelve and one-half pages of its September issue to educational materials particularly valuable for home economics teachers. A total of one hundred eighty-seven firms, including sixty-seven food companies, list their leaflets, posters and exhibits available on request or for a small charge.

CURD TENSION OF MILK—by Council on Foods. Journal American Medical Association, June 12 and June 19, 1937.

These two articles discuss the nutritional significance of the curd tension of milk. The first article deals with the production and properties of soft curd milks; the second article summarizes and evaluates the available experimental and clinical evidence of the relation of curd tension to the digestibility of milk, especially in infant feeding.

A PRACTICAL PLAN

(Continued from page three)

are adequate it is almost impossible to obtain in the other two meals all of the essential foods in the amounts needed daily.

Third week—Second observations are made on lunches found to be poor on the first check. It is then the responsibility of the student to try to improve the lunches she has observed, along the lines suggested in class.

Results—The following are the chief outcomes of this project: (1) Improves the eating habits of pupils in the class as well as of at least two other girls per pupil. (2) Shows the class that students with excellent scholarship records usually have good food habits. (3) Proves to the class that cost is not a factor, that the best lunch may cost the least. (4) Offers an opportunity to make suggestions to the cafeteria manager on foods to make available for adequate lunches. (5) Interests other students in taking home economics courses and establishes excellent relations with homes.

An Investment in Protective Foods

(Continued from page one)

problem is to acquaint the women who purchase foods with the importance of providing these and the other protective foods daily, in the family menus. Investment in foods of high quality is an excellent health insurance.

Barring accidents and diseases other than of dietary origin, investment in the protective foods is investment in good physical development, retention of the characteristics of youth, and stability of the nervous system. And there is no way to secure these except through good nutrition.

Note—References to all items mentioned in **Nutrition News** may be obtained on request from the National Dairy Council, 111 North Canal Street Chicago, Illinois.